

In the Claims:

Please amend the claims as follows:

Claims 1 – 96 (Canceled).

Claim 97. (CURRENTLY AMENDED) A new method for the quantification of ligand

binding to a surface, using hapten-conjugated ligands, comprising:

{a}(a) applying a hapten-ligand, comprising a ligand possessing an antibody-recognizable hapten, to said surface, and,

{b}(b) waiting for a period of time, so as to allow a binding of said hapten-ligand to said surface, thereby producing bound ligand, and,

{c}(c) removing any unbound hapten-ligand, from said surface, and,

{d}(d) solubilizing said bound ligand, thereby producing a lysate, and,

{e}(e) applying separately onto a membrane,

{1}(1) said lysate, and,

{2}(2) a plurality of standards, comprising solutions containing increasing levels of known amounts of the hapten-ligand,

thereby producing membrane-bound hapten-ligand and,

{f}(f) applying to said membrane,

{1}(1) an enzyme-conjugated antibody to specific for said hapten, and,

{2}(2) a color or light-producing substrate that contacts the enzyme on said enzyme-conjugated antibody,

thereby producing a signal, and,

~~{g}~~(g) comparing said signal arising from said enzyme associated with said membrane-bound hapten-ligand arising from said standards, to the known amount of hapten-ligand contained in said standards, thereby producing a standard curve, and,

~~{h}~~(h) ~~comparing said signal arising from said enzyme associated with said membrane-bound hapten-ligand arising from said lysate, to said standard curve, thereby~~ quantifying the amount of said hapten-ligand originally bound to said surface, by quantifying the amount of the hapten-ligand contained in said membrane-bound hapten-ligand arising from said lysate, by comparing said signal arising thereof to said standard curve and, whereby the ~~quantifying of the amount of the membrane-bound hapten-ligand arising from said lysate, is used to quantify the amount of said hapten-ligand originally bound to said surface, and,~~ whereby the use of radio- labeled ligand is avoided.

Claim 98. (CURRENTLY AMENDED) The method of Claim 97 ~~step (a)~~, wherein said

~~ligand being applied to said surface, is~~ method for the quantification of ligand binding to a surface, is further comprising:

~~{a}~~ said hapten-ligand, and,

~~{b}~~ un-conjugated ligand, comprising said ligand which does not possess said hapten, and,

(a) applying to said surface of Claim 97 step (a), said ligand which is further comprising a mixture of:

(1) said hapten-ligand, and,

(2) un-conjugated ligand, comprising said ligand which does not possess said hapten, and,

(b) verifying the specific binding of said hapten-ligand to said surface, by comparing ~~whereby~~ said signal from Claim 97 step {f} (f) step [2] (2) arising from said lysate containing both said hapten-ligand, and said un-conjugated ligand is compared to said signal arising from said lysate containing said hapten-ligand only, thereby verifying the specific binding of said hapten-ligand to said surface.

Claim 99. (CURRENTLY AMENDED) The method of Claim 97, wherein the quantification of ligand binding to a surface, is further ~~comprises~~ comprising:

~~{a}~~(a) separating said lysate of Claim 97 step ~~{d}~~ (d) by electrophoresis, and,

~~{b}~~(b) separating said standards of Claim 97 step ~~{e}~~ (e) step [2] (2), by electrophoresis, and,

~~{b}~~(c) applying separated lysate, and separated standards to said membrane and,

(d) verifying ~~whereby~~ the location of ~~said signal from Claim 97 step {f} (f) step [2] (2) arising from~~ said hapten-ligand, contained in separated

lysates, on said membrane, ~~is verified~~ by comparing ~~its~~ said signal arising
thereof ~~it~~ to the location of said signal arising from separated standards, on
said membrane.

Claim 100. (PREVIOUSLY ADDED) The method of Claim 99 wherein said method of
electrophoresis is selected from the group consisting of SDS-PAGE,
electrophoresis according to Schagger Von Jagow, and agarose electrophoresis.

Claim 101. (CURRENTLY AMENDED) The method of Claim 97 step ~~{f}~~ (f) step ~~{1}~~ (1),
wherein the applying of an antibody to said membrane is further comprising:
~~{a}~~(a) applying an anti-hapten antibody, comprising an antibody specific for
said hapten, to said membrane and,
~~{b}~~(b) applying an enzyme-conjugated antibody specific for said ~~to~~ anti-
hapten antibody, to said membrane.

Claim 102. (PREVIOUSLY ADDED) The method of Claim 97, wherein said surface
includes biological cells.

Claim 103. (PREVIOUSLY ADDED) The method of Claim 97, wherein said hapten
includes compounds which can be specifically recognized by an antibody.

Claim 104. (PREVIOUSLY ADDED) The method of Claim 97, wherein said hapten is selected from the group consisting of, fluorescein, biotin, rhodamine, and digoxigenin.

Claim 105. (PREVIOUSLY ADDED) The method of Claim 97, wherein said ligand is a biological factor.

Claim 106. (PREVIOUSLY ADDED) The method of Claim 97, wherein said ligand is a protein.

Claim 107. (PREVIOUSLY ADDED) The method of Claim 106, wherein said protein is selected from the group consisting of transferrin, concanavalin A, avidin, annexin V, and insulin.

Claim 108. (PREVIOUSLY ADDED) The method of Claim 97, wherein said ligand is DNA.

Claim 109. (CURRENTLY AMENDED) The method of Claim 97 step [e] (e), wherein the applying of said lysate and said standards onto said membrane is achieved by a blotting method.

Claim 110. (CURRENTLY AMENDED) The method of Claim 109 , wherein said blotting method is selected from the group consisting of electroblotting, dot blotting, slot blotting, ~~or~~ and Western blotting.

Claim 111. (CURRENTLY AMENDED) The method of Claim 97 step {e} (e), wherein said membrane includes transfer membranes.

Claim 112. (CURRENTLY AMENDED) The method of Claim 97 step {e} (e), wherein said membrane is selected from the group consisting of protein binding membranes, and DNA binding membranes.

Claim 113. (CURRENTLY AMENDED) The method of Claim 97 step {e} (e), wherein said membrane is selected from the group consisting of nitrocellulose, and ~~or nytran~~ nylon membranes.

Claim 114. (CURRENTLY AMENDED) The method of Claim 97 step {f} (f), wherein said enzyme is horseradish peroxidase.

Claim 115. (CURRENTLY AMENDED) The method of claim 97 step ~~{f}~~ (f) step ~~{2}~~ (2),

wherein the quantifying of said signal, arising from said light producing substrate, on said membrane is further comprising:

- (a) placing said membrane in contact with photographic film, and,
- (b) analyzing said signal on said photographic film using an imager.

Claim 116. (CURRENTLY AMENDED) The method of claim 97 step (f), wherein the applying to said membrane further comprises an initial applying to said membrane of a block solution. ~~comprising a solution containing agents which occupy all non-occupied sites on said membrane, thereby preventing the binding of the antibody specific for said hapten, to sites other than said membrane-bound hapten-ligand.~~